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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/784,836 | 02/24/2004 | Peter Wiedenberg | Q78998 | 1486 |
| 23373 | 7590 | 12/15/2005 | EXAMINER | |
| SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | LAY, MICHELLE K | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2672 | |

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/784,836 | Applicant(s) WIEDENBERG ET AL. | |
| | Examiner Michelle K. Lay | Art Unit 2672 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to: See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed on 14 November 2005, has been entered and made of record. Claims 2 and 9 have been cancelled. Claims 1, 3-8, and 10-14 are pending.

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues Hanna does not teach the position coordinates of the image information are based on at least one of space coordinate of the camera, a zoom factor and a space vector. Examiner respectfully disagrees. Hanna estimates the pose of the detected logo pattern "A" by using the orientation, scale and perspective parameters of each of the sequence of successive 2D video image frames of the background scene with respect to the image of one or more reference objects in that video image frame [col. 4, lines 40-50].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3-8, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanna et al. (US Patent No. 5,566,251) in view of Silverbrook (US Patent No. 5,479,205).

Hanna et al. teaches the limitation of claims 1, 3-8, and 10-14 with the exception of disclosing a triggering unit and a display screen. However, Silverbrook discloses a video camera and recorder for combining a real-time image with a secondary image.

In regards to claims 1, 7, 8 and 14 –

Referring to Fig. 2, camera 200A records in real time a sequence of successive 2-dimensional video image frames of physical three-dimensional objects, such as billboard (202), situated in background scene (204A) (claims 1, 8: *a camera configured to acquire image information of a section of an environment*) [column 4, lines 18-22]. Billboard (202) is assumed immovable, but camera (200A) is moveable both to the left and right and toward and away from the objects as indicated by arrowed lines (206A). This will result in the orientation and scale of each of the sequence of video images of billboard (202) in background scene (204A) changing in correspondence with the movement of camera (200) from one position to another, as indicated by arrow lines (208A) (claims 1, 8: *at least one of a zoom device configured to alter a size of the section in accordance with a zoom factor and a device configured for three-dimensional orientation of the a camera in accordance with a space vector*) [column 4, lines 24-33]. Means 210A performs the functions of (1) detecting logo pattern "A" and (2) estimating the pose of detected logo pattern "A" (i.e., estimating the orientation, scale and

perspective parameters of logo pattern "A" in each of the sequence of successive 2D video image frames of background scene (204A) with respect to the image of one or more reference objects, such as billboard (202) itself) in that video image frame (claims 1, 8: *wherein the computer unit is configured to compute position coordinates of the image information based on at least one of space coordinates of the camera, the zoom factor, and the space vector, computer positions of representations of the image information on a display area of a display device*; claims 7, 14: *processing image information*) [column 4, lines 43-49]. Additionally, means 214, responsive to a "pose information" (i.e., orientation, scale, perspective distortion, etc. parameters of detected logo pattern "A") input (215) from means 210A and on-time selection via input (217) of manually-selected size, shape, orientation, etc. parameters of logo pattern "B" itself performs the function of geometrically transforming the orientation and scale of logo "B" of foreground scene (204B) to match the orientation and scale of the estimated pose of logo pattern "A" in the current image frame (as indicated by (216)) (claims 1, 8: *wherein the computer unit is configured to assign the user information to the position coordinates*; claims 7, 14: *processing use information*) [column 4, lines 64-68; column 5, lines 1-6]. The operation of video switch (212) merges the video output of camera (200) with the geometrically-transformed logo pattern "B" to result in output scene (218), wherein logo pattern "A" is replaced by inserted logo pattern "B" (claims 1, 8: *an image processing unit for processing the image information and the user information so as to reproduce the image information and the user information with the display device and so as to insert the user information in a location on the display area at the positions of*

the representations of the image information having the position coordinates to which the respective user information is assigned; claims 7, 14: reproducing the image information and the user information with the display device, inserting the user information in the location on the display area in accordance with an imaging procedure) [column 5, lines 6-9].

Silverbrook discloses a camcorder system. Referring to Fig. 1, the video camcorder system's circuitry (40) includes an alpha-numeric liquid crystal display (LCD) (61) and various miscellaneous controls (62) such as an auto zoom controller (66), and a manual zoom control (70) as seen in Fig. 2 (claims 1, 8: *comprises a triggering unit configured to trigger at least one of the camera, the zoom device, and the device for 3D orientation of the camera in accordance with at least one of the zoom factor and the space vector*) [column 2, lines 23-30]. The circuitry (40) of the system receives user input via a keyboard (17) that includes an alphanumeric keypad (33) a touch panel (31), and animation control keys (38) as shown in Fig. 2. The keyboard (17) connects to a controller (16) that interprets commands and provides control commands onto a bus (25) that interconnects other components within the system (40) [column 2; lines 43-45].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the camera of Hanna et al. with the video camcorder system of Silverbrook where the output from the CCD of Silverbrook would be connected to means 210A of Hanna et al. so that the orientation and scaling of the camera within the combined invention is able to be user controlled.

In regards to claims **3** and **10** –

The rationale of claims 1 and 8 respectively, are incorporated herein. Referring to Fig. 2 of Hanna et al., camera (200A) is moveable both to the left and right and toward and away from the objects as indicated by arrowed lines (206A). This will result in the orientation and scale of each of the sequence of video images of billboard (202) in background scene (204A) changing in correspondence with the movement of camera (200) from one position to another, as indicated by arrow lines (208A) [column 4, lines 24-33]. Thus the movement of the camera toward the billboard (202) in the background scene (204A) and the scaling correspond to a zoom function. Means 210A performs the functions of (1) detecting logo pattern “A” and (2) estimating the pose of detected logo pattern “A” (i.e., estimating the orientation, scale and perspective parameters of logo pattern “A” in each of the sequence of successive 2D video image frames of background scene (204A) with respect to the image of one or more reference objects, such as billboard (202) itself) in that video image frame [column 4, lines 43-49]. Additionally, means 214, responsive to a “pose information” (i.e., orientation, scale, perspective distortion, etc. parameters of detected logo pattern “A”) input (215) from means 210A and on-time selection via input (217) of manually-selected size, shape, orientation, etc. parameters of logo pattern “B” itself performs the function of geometrically transforming the orientation and scale of logo “B” of foreground scene (204B) to match the orientation and scale of the estimated pose of logo pattern “A” in the current image frame (as indicated by (216)) (claims **3**, **10**: *configured to select and*

insert the user information as a function of the zoom factor) [column 4, lines 64-68;
column 5, lines 1-6].

In regards to claim **4** and **11** –

The rationale of claims 1 and 8 respectively, are incorporated herein. Referring to Fig. 2 of Hanna et al., the operation of video switch (212) merges the video output of camera (200) with the geometrically transformed logo pattern "B" (i.e. user information as claimed) to result in output scene (218), wherein logo pattern "A" is replaced by inserted logo pattern "B". Thus, the pose of logo pattern "B" in output scene (218) changes in correspondence with the movement of camera (200) from one position to another, as indicated by arrowed lines (220) (claims **4**, **11**: *user information comprises at least one of static and dynamic information*) [column 5, lines 5-12].

In regards to claims **5** and **12** –

The rationale of claims 1 and 8 respectively, are incorporated herein. Silverbrook discloses a camcorder system. Referring to Fig. 1, the video camcorder system's circuitry (40) includes an alpha-numeric liquid crystal display (LCD) (61) (claims **5**, **12**: *the camera comprises a video camera and the display device comprises a display screen*) and various miscellaneous controls (62) such as an auto zoom controller (66), and a manual zoom control (70) as seen in Fig. 2 [column 2, lines 23-30].

In regards to claims 6 and 13 –

The rationale of claims 1 and 8 respectively, are incorporated herein. Silverbrook discloses a camcorder system. Referring to Fig. 1, the video camcorder system's circuitry (40) includes an alpha-numeric liquid crystal display (LCD) (61) and various miscellaneous controls (62) such as an auto zoom controller (66), and a manual zoom control (70) as seen in Fig. 2 (*said triggering unit*) [column 2, lines 23-30]. The circuitry (40) of the system receives user input via a keyboard (17) that includes an alphanumeric keypad (33) a touch panel (31), and animation control keys (38) as shown in Fig. 2. The keyboard (17) connects to a controller (16) that interprets commands and provides control commands onto a bus (25) that interconnects other components within the system (40) (claims 6, 13: *the triggering unit comprises an operator interface*) [column 2, lines 43-45].

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle K. Lay whose telephone number is (571) 272-7661. The examiner can normally be reached on Monday - Friday, 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michelle K. Lay
Patent Examiner
Art Unit 2672

11.29.2005 mkl


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12/2/05